

## ON THE HABITAT OF HALIASPIS SPARTINAE (COMSTOCK) (HOMOPTERA: DIASPIDIDAE)<sup>1</sup>

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In the original description of *Haliaspis spartinae* (Comstock 1883), it was stated that "The insects were on plants growing so that at high tide they were commonly submerged in pure salt water nearly up to the insects, which when collected were drenched with salt spray." Sasser (1908) reported that the insect was frequently submerged in brackish water. Neither the frequency nor length of submersion period was indicated in the above reports.

One of our collections from Cumberland Island, Georgia, had colonies of reproducing *H. spartinae* at the same level on the plant (*Spartina alterniflora*) as reproducing barnacles, *Balanus* sp. In fact, barnacles occurred as much as 1 foot above some colonies of *H. spartinae*. The scale insects at the lower levels on the plant were covered with a thick layer of salt marsh detritus. *Haliaspis spartinae* is able to survive in the intertidal zone, tolerating submersion for at least 1 hour on each high tide (ca. 12 hours).

One hundred fifty-eight dead adult female *H. spartinae* were recorded from winter-killed *Spartina* material collected III-20-71. An average of 25 viable eggs was found under the scales of 87 of the adults, indicating that this scale insect overwinters in the egg stage on dead host material. We do not know of any other diaspidid that overwinters on dead plant material, but it may not be unusual among certain grass infesting species.

### LITERATURE CITED

- COMSTOCK, J. H. 1883. Second report on scale insects. Cornell Univ. Agr. Exp. Sta., Dept. Ent. Rep. 2:106-7.
- SASSER, E. R. 1908. The salt-marsh grass scale. Proc. Ent. Soc. Washington 9:141-142.

*Descriptors:* Homoptera; Diaspididae; *Haliaspis spartinae*, habitat; Georgia, *Haliaspis spartinae*; salt marsh.

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## The Entomologist's Library

This section contains titles of books, monographs, and articles received by the editor that may be of special interest to entomologists and biologists. A brief statement of contents and items of interest are noted. Brief analytical reviews may be submitted for possible publication. All correspondence for this section should be addressed to Dr. Eugene J. Gerberg, Book Review Editor, 6603 Johnnycake Road, Baltimore, MD 21207.

**Publications received.**—As soon as a publication is received, it is listed in this section. The following have come to the attention of the editor for this month. Please note that this section is not limited to books. See above masthead.

### 1. General

- Chauvin, Remy.** 1967. The world of an insect. McGraw-Hill Book Co., New York, 254 p. Cloth \$4.95.
- Mayr, Ernst.** 1970. Populations, species, and evolution. Harvard University Press, Cambridge, MA 02134. xv + 453 p. Cloth \$ 10.00.

### 2. Invertebrates

- Snow, Keith R.** 1970. The arachnids. An introduction. Columbia University Press, New York. 84 p. Cloth \$5.00.

### 4. Natural History

- Ault, Phil.** 1970. Wonders of the mosquito world. Dodd, Mead, and Co., New York. 64 p. Cloth.
- Howse, P. E.** 1970. Termites: a study in social behavior. Hillary House Publishers Ltd., New York. 150 p. Paper \$2.25; cloth \$5.50.

### 5. Morphology

- Matsuda, Ryvichi.** 1970. Morphology and evolution of the insect thorax. Mem. 76. Ent. Soc. Canada. 431 p. Paper.

### 6. Physiology

- Bursell, E.** 1970. An introduction to insect physiology. Academic Press. xiv + 276 p. Cloth \$10.00.

### 9. Ecology

- Pielou, E. C.** 1969. An introduction and mathematical ecology. John Wiley and Sons, New York. viii + 286 p. Cloth \$14.95.
- Cox, George W.** 1970. Laboratory manual of general ecology, 6th printing. Wm. C. Brown Co., Publishers, Dubuque, Iowa. ix + 165 p. Paper \$3.75.

### 12. Medical Entomology and Parasitology

- Greenberg, Bernard.** 1971. Flies and disease, vol. 1: Princeton University Press, Princeton, NJ. viii + 856 p. Cloth \$ 30.00.

### 13. Pest Management

- Jacobson, M. and Crosby, D. G. 1970. Naturally occurring insecticides. Marcel Dekker, Inc., New York, NY 10016. xii + 585 p. Cloth \$ 33.75.
- Gillette, J. W. 1970. The biological impact of pesticides in the environment. Oregon State University Press, Corvallis, OR 97331. xi + 210p. Paper \$10.00.
- Frohlich, G. and Rodewald, W. 1970. Pests and diseases of tropical crops and their control. Pergamon Press, Inc., New York, NY. ix + 371 p. Cloth \$19.00.
- Hussey, N. W., Read, W. H., and Hesling, J. J. 1970. The pests of protected cultivation. American Elsevier Publ. Co., Inc., New York, NY. viii + 404 p. Cloth \$26.00.
- O'Brien, R. D. 1967. Insecticides action and metabolism. Academic Press, New York. xi + 332 p. Cloth \$ 14.00.
- O'Brien, R. D. and Yamamoto, I. 1970. Biochemical toxicology of insecticides. Academic Press, New York. vii + 218 p. Cloth \$ 8.50.

### 17. Identification Aids

#### Siphonaptera

- Holland, George P. 1969. Contribution toward a monograph of the fleas of New Guinea. Mem. Ent. Soc. Canada No. 61. 77 p. 216 figs.

#### Lepidoptera

- Hodges, Ronald W. 1971. The moths of America north of Mexico. Fasc. 21, Sphingoidea. Entomological Reprint Specialists. Los Angeles, CA 90007. xii + 158 p. 14 color pls. Paper \$24.00 [Subscription rates available.]

### 18. Techniques

- Clarke, Geoffrey M. 1970. Statistics and experimental design. American Elsevier Publ. Co., New York, NY 10017. vi + 161 p. Cloth \$6.75.

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### 5. Field Guides

- BUTTERFLIES OF TRINIDAD AND TOBAGO, by Malcom Barcant. Collins Publ., London, 1970. 314 p. Cloth.

One of the most encouraging signs of our survival in this crowded world is the commercial publication of field guides for the identification of insects. If there is sufficient interest in the butterflies of Trinidad and Tobago to make the publication of this field guide possible, there are enough people in the world interested in natural history to bring about the conservation we so desperately need.

According to this book Trinidad, in proportion to its size, is probably the richest place on earth for butterflies—617 indigenous species, which is almost twice as many as all of Europe. The field guide discusses 387 of these, omitting details about 216 species in the difficult family Hesperidae. There are 356 species illustrated, 241 of them in color.

The book is most interestingly arranged, designed for use by the non-entomological public, concise, packed full of information valuable not only to those with avocational interest, but commanding the attention of the Lepidopterist, monographers of the Rhopalocera, and the zoogeographer.—R. H. Arnett, Jr.

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### 15. Regional Guides

ADVANCES IN ANTARCTIC AND FAR SOUTHERN ENTOMOLOGY, by J. L. Gressitt and R. W. Strandtmann (eds.). Pacific Insects Monograph 25. Entomology Department, Bernice P. Bishop Museum, Honolulu, HI 96818, 1971. 226 p. Cloth \$8.50; paper \$9.50.

This volume is a collection of miscellaneous papers which have been written since the publication in 1967 of "Entomology of Antarctica" (Antarctic Research Series vol. 10). These contributions represent a mixture of field notes and zoogeographical, ecological, or taxonomic discussions. These are in part supplementary to articles in the above-mentioned volume, and partly have no direct relation to it, or were intended to be included in it but received too late. To these articles is appended an article consisting of a catalog and bibliography of Acarina of the New Zealand area. The volume will be useful to those interested in any aspect of entomology of this region, particularly zoogeographers.—*Ed.*

SUBARCTIC ENTOMOLOGY, PARTICULARLY OF SOUTH GEORGIA AND HEART ISLAND, J. Linsley Gressitt (ed.). Pacific Insects Monograph 23, Bernice P. Bishop Museum, P. O. Box 6037, Honolulu, HI 96818, 1970. 374 p. Cloth, \$ 9.50; paper, \$ 8.50.

This volume is primarily the reports of studies of collections resulting from the U. S. Antarctic Research Program's 1962-1964 Bird Island (South Georgia) expedition, and the South Indian Ocean Expedition to Heart Island (1964-1965). Included are papers on Araneae, Acarina, Collembola, Mallophaga, Anoplura, Thysanoptera, Lepidoptera, Coleoptera, Diptera, Siphonaptera, Hymenoptera. Dr. Gressitt concludes this monograph with an excellent article on subarctic entomology and biogeography.—*Ed.*

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### 17. Identification Aids

#### Acarina

THE SPIDER-MITE COMPLEX (ACARINA: TETRANYCHOIDEA) IN MISSOURI, by Siegfried E. Thewke and Wilbur R. Enns. University of Missouri Museum Contributions, Monograph No. 1, Columbia, MO 65201, 1970. 106 p. Paper, \$ 2.00.

The major function of this work is to provide a guide to the known species of Tetranychidea ("spider mites") and Tenuipalpidae ("false spider mites") in Missouri. Linotetraniidae and Tuckerellidae are not presently known to occur in Missouri, but are treated on a hypothetical basis in the event that they may become introduced. Included are keys, descriptions, host plant associations, and diagnostic illustrations of 35 species of spider mites and 10 false spider mites.—*Ed.*

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